

on each side above on the first abdominal segment, a large, finely black-rimmed, rounded, orange spot seated at the posterior incisure on a fine black line which enlarges where the spot touches it; the two series of small abdominal spots have become distinctly turquoise.

In *Heraclides cresphontes* (Fig. 5) the young larva is provided with exceptionally large tubercles, which are largest at the two extremities, and especially on the first thoracic segment, and these are all thickly beset with bristles; the body is largest in front but scarcely tumid; the colors are very dark brown, more or less mottled, with a distinct white saddle and lighter extremities. Excepting that the front portion of the body is a little tumid, and that the tubercles become relatively less important, there is no change in the next two stages. In the fourth stage the front part of the body becomes distinctly tumid and at the same time develops an irregular, white, curving lateral band, setting off the tumidity to better advantage; the colors and patterns are otherwise the same as before, but the tubercles have become lenticles, and around them have clustered rings of brighter color, by which the body is much mottled. No further change is made in the final stage excepting that the colors are more varied, the whites have become more of a cream color, and the mottling is more noticeable, partly from the larger size; in

general the disposition of the markings is much as in the newly born caterpillar.

In *Papilio astyanax* (Fig. 6), finally, we have at birth a jet black caterpillar with a white saddle across the middle, and occasionally a white fleck or two in front of it; the body is cylindrical or nearly so, but the thorax shows a slight tumidity; it is tuberculate, with conical tubercles, beset with bristles; there is little inequality in the length of the tubercles, but those on the side of the body are dull orange. In the second and third stages we have a repetition of the same features in color, form and tubercles; the orange, however, becomes a little more vivid. In the fourth stage, too, the dark tubercles still remain but are relatively less important, and have at their anterior base a yellow or orange spot; while in the place of the orange tubercles are orange lenticles, and these and the other orange spots break what would otherwise be a broad, black, transverse band in the middle of each segment; for now the body has become green and is transversely striped with black in the middle and (more narrowly) at the front edge of each segment, and no sign whatever of the saddle remains; the form at the same time becomes more completely cylindrical, but the body tapers in front. In the last stage this general style of ornamentation and of form is kept, but the tubercles and lenticles altogether disappear.

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